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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/888,009	06/22/2001	Tatsuya Yoshikawa	13298-004001	8488

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BOSTON, MA 02110

EXAMINER

STRICKLAND, JONAS N

ART UNIT	PAPER NUMBER
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1754

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/888,009

Applicant(s)

YOSHIKAWA, TATSUYA

Examiner

Jonas N Strickland

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 June 2001 .
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____ .
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3 .
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Claim Objections

1. Claims 2 and 16 are objected to because of the following informalities: Applicant recites "in the state of a physically mixed". A physically mixed what? Appropriate correction is required.
2. Claim 3 is objected to because of the following informalities: Applicant recites "as homogeneous physical mixture". It is suggested that Applicant recite -- as a homogeneous physical mixture --. Appropriate correction is required.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-12, 16, and 17 are rejected under 35 U.S.C. 102(b) as being anticipated by Kato et al. (EP 0365308 A2).

Applicant claims an exhaust gas purifying catalyst comprising a composition including a first component of a composite oxide containing zirconium and manganese and/or cobalt and a second component of zeolite.

Kato et al. discloses an exhaust gas purifying catalyst wherein the catalyst comprises Co supported by Zr oxide mixed with a zeolite (see abstract). Kato et al. continues to disclose wherein the two components are mixed and the mixing is preferred to be a physical mixing. The catalyst composition may be slurried and coated

onto a ceramic honeycomb (p. 3, lines 41-44). Kato et al. continues to disclose wherein the Co/Zr is preferably in the range of 20/80 to 1/99 and that the first and second components are in the range of 5/95 to 50/50 (p. 3, lines 27-38). The zeolite is a hydrogen type mordenite (p. 3, lines 29-30). The zeolite may be modified with Ca (p. 3, line 30). The catalyst disclosed by Kato et al. is capable of purifying nitrogen oxides from various engines, including diesel engines (see abstract).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

7. Claims 13-15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kato et al. (EP 0365308 A2) in view of Montreuil et al. (US Patent 5,328,672).

Applicant claims with respect to claims 13-15, wherein the first component further contains at least one element. The teachings of Kato et al. have been discussed with

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respect to claims 1-12, 16, and 17. However, Kato et al. does not discuss wherein the first component further contains at least one element.

However, Montreuil et al. teaches a method for the purification of lean-burn engine exhaust gas, which includes a dual-phase zeolite having a transition metal-containing zeolite phase and a transition metal-containing oxide phase. The transition metal-containing oxide phase is comprised of the oxide zirconia and transition metals, such as manganese, copper, cobalt, iron, calcium, and mixtures thereof (col. 2, lines 14-46). Montreuil et al. continues to teach wherein the transition metal (copper) is present in an amount between 0.1-20% by weight (col. 3, lines 3-11).

Therefore, it would have been obvious to one of ordinary skill in the art to modify the teachings of Kato et al., based on the teachings of Montreuil, by having an element, such as iron and calcium with a zirconia/manganese or cobalt composite, since Montreuil et al. teaches a zeolite component and a zirconia/manganese or cobalt component, which may include a mixture of iron, as well as calcium. Such modification would have been obvious to one of ordinary skill in the art, because one of ordinary skill in the art would have expected the zeolite and zirconia/ manganese or cobalt component catalytic mixture used for treating exhaust gases as taught by Montreuil et al., to be similarly useful and applicable to the teachings of Kato et al., which teaches an exhaust gas purifying catalyst wherein the catalyst comprises Co supported by Zr oxide mixed with a zeolite.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Tamura et al. (USP 5,041,272) ; Montreuil et al. (USP 5,155,077) ; Hayasaka et al. (USP 5,312,608) ; Miyoshi et al. (USP 5,911,960).

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jonas N Strickland whose telephone number is 703-306-5692. The examiner can normally be reached on M-TH. 7:30-5:00, off 1st Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stanley Silverman can be reached on 703-308-3837. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0661.

Int
Jonas N. Strickland
April 17, 2003

Wayne A. Langel
WAYNE A. LANGEL
PRIMARY EXAMINER